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Patent Number: JP8245291
Publication date: 1996-09-24
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Requested Patent: ☐ JP8245291
Application Number: JP19950051203 19950310
Priority Number(s):
IPC Classification: C30B25/14; C30B29/40; H01L21/205
EC Classification:
EC Classification:
Equivalents:

Abstract

PURPOSE: To provide a method for growing a III-V compd. semiconductor crystal by which the thickness of a layer in which carbon has been doped at a high concn. can be controlled on an atomic layer level and highly uniform growth can be carried out even on a substrate of a large diameter.

CONSTITUTION: When a III-V compd. semiconductor crystal is grown by an organometallic vapor growth method, organometallic stock of a group III metal and organometallic stock of a group V metal are alternately fed and carbon is doped. If necessary, hydride of a group V metal is fed between the feeds of the stocks or added to the latter stock and fed, the amt. of the hydride fed and the feeding time are regulated and the amt. of carbon doped is controlled.